

### REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection which were raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

### Status of Claims

Claim 11-19 are pending in the application. Claim 11-19 have been rejected. Claim 11, 13-15, and 17-19 have been amended. Claim 16 has been canceled without prejudice or disclaimer. New claims 20 and 21 have been added. Applicant respectfully assert that the amendment to the claims add no new matter.

### CLAIM REJECTIONS

#### 35 U.S.C. §112 Rejections

Claims 13 and 19 of 10/511,755 (hereinafter '755) were objected to by the examiner and appropriate correction was required. With respect to the rejection of claim 13 ('755) the synonymous "Manuka oil" was omitted from claim. With respect to the rejection of claim 19 ('755) the following terms were spelled correctly: "arahinoic", "lingocerinic", "palamitinoleic", "lonoleic", "undecelenic", and "recinoleic".

Claims 11, 14-16, 18 and 19 of '755 were rejected by the examiner under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to the rejection of claim 11 ('755), the term "emulsifier" was omitted and the limitation of the claim was redefined. Therefore, applicant claims *"emulsion comprising tea tree oil solubilized in alkali or ammonium salts of organic fatty acids forming an emulsion "*.

With respect to the rejection of claims 14-16 ('755), the amounts of the ingredients were set forth in terms of "about", "weight percent" and "total volume of composition". Therefore, applicant claims *"the concentration of said tea tree oil is about 0.01% up to about 10% (weight percent), based on the total volume of said emulsion; the concentration of said tea tree oil is about 0.1% to about 1.5% (weight percent), based on the total volume of said emulsion; and the concentration of the tea tree oil is about 0.1% to about 1.5% (weight percent), based on the total volume of said emulsion"*.

The language of claims 13- 19 ('755) have been corrected by the applicant in order to place the claims into better form, and to clearly set forth the metes and bounds of the patent. Thereof, applicant has changed the term "the" to "said" (claim 13-19). In addition, applicant has also added the term "from a group including", and replaced the term "the acid" by the term "organic fatty acid" (claim 19). Furthermore, the term "or any mixture thereof" (claim 12 and 18) was added. Thus, it is believed that those changes more properly and clearly set forth the metes and bounds of the claims.

Claims 11-13, 17 and 19 of '755 were rejected by the examiner under 35 U.S.C. 102(a), as being anticipated by Hyldgaard et al U.S. Patent No. 6,342,208 (hereinafter '208). It is respectfully submitted that claims 11-13, 17 and 19 are considered novel and are not anticipated, in the light of arguments set forth below.

Applicant ('755) has amended claim 11 to set forth a general description of a **"non phytotoxic emulsion"** (par. 0004) for use in agriculture crop, especially for treating fungal diseases (par. 0030), which provides an appropriate definition for the present invention and emphasize the inventiveness. Claim 11: *"A non-phytotoxic emulsion for use in agriculture crop, especially for treating fungal disease, comprising tea tree oil solubilized in alkali or ammonium salts of organic fatty acids forming an emulsion"*.

Applicant ('755) has also added claims 21-22 to emphasize the inventiveness and the use of the **"non phytotoxicity emulsion"**. As disclosed by '755, *"said emulsion is characterized by fungicide activity for treating in a non limiting manner*

*plants, corps and soil diseases (claim 21); wherein said pathogens are located in the flowers, fruits, leaves, roots, tubers, bulbs, or any other plant matter (claim 22).*

The depiction of the emulsion by "*fungicide activity for treating in a non limiting manner plants, corps and soil diseases*" (claim 21), *along with the depiction of the pathogen location " in the flowers, fruits, leaves, roots, tubers, bulbs, or any other plant matter"* (claim 22) is more suitable for the present invention and emphasizes the improvement of the emulsion and its novel use in agriculture. .

Patent '208 discloses "*an oil-in-water emulsion for application on a skin surface, the emulsion comprising an oily phase and an aqueous phase said oily phase comprising a first lipid of vegetable or animal origin*" (claim 1); "*A method for cleansing or conditioning a skirt surface, comprising applying, to the skin surface, the oil-in-water emulsion of claim 1*" (claim 25). Furthermore, '208 shows useful properties with respect to "*protection of the skin against sun light and with respect to combating attack from parasites like lice, fleas and scabies on mammals such as humans, domestic animals and pets*" (line 19-23).

The "protective layer" (line 48-51) disclosed by '208 may protect human or animal skin, but it is definitely toxic to plant's epidermis and pores. In contrast, patent '755 is related mainly to the use of the tea tree oil emulsion on *plants flowers, fruits, leaves, roots, tubers, bulbs, or any other plant matter*".

The antifungal properties of tea tree oil are known in the art; however, **the significant phytotoxicity has to date prevented its commercial use in agriculture.** For example, Washington *et al.*, has shown in 1999 in the Australian Journal of Experimental Agriculture (39:1, 86-81pp) that tea tree oil mainly inhibits fungi that attack human, and for infected plants it is phytotoxic.

The present invention ('755) teaches "*the need of composition for treating fungal plant pathogens*; *It was thus desirable to develop a composition adapted to the treatment of a wide range of fungal plant pathogens, e.g., which would not use any of the above known compositions, e.g., mineral oils, detergents and/or fats. However, it may comprise tea tree oil as one of its components. It should be convenient to use and be stable*". It is also discloses "***a non-phytotoxic emulsion for use in agriculture crop,***

*especially for treating fungal disease, comprising tea tree oil solubilized in alkali or ammonium salts of organic fatty acids forming an emulsion" (amended claim 20).*

As further disclosed by '755, *"the TTO containing fungicide composition and especially the fungicide compositions obtained by means of the aforementioned method are characterized with fungicide activity and by significant plants, corps and soil diseases"* (par. 0029).

The non-phytotoxicity feature of the tea tree oil emulsion constitutes an inventive step. This unique feature enables the introduction of tea tree oil, along with its fungicide activity to disinfecting agricultural crops.

Therefore, for all of the above reasons, claims 11-13, 17 and 19 ('755) are considered novel and patentable.

### **35 U.S.C. §103 rejections**

Claims 14-19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Patent '208, in view of Saleh *et al.* U.S. Patent 6,387,382 (hereinafter '382), and Lawless (the illustrated encyclopedia of essential oils, Element Books; 169, 1999).

Similarly to Patent '208, Patent '382 discloses "multipurpose skin preparation in the form of oil-in-water emulsion, which also leaves behind a protective layer. A layer which prevents the use of cited emulsion in plants. As cited by '382 *"the skin preparation contains a sufficient amount of siloxane polymer and a sufficient amount of cyclic silicone such that after the skin preparation is applied to the skin and a coating is formed on the skin, when the skin is washed 3 to 4 times with soap and water for a length of time from about 15 seconds to 20 seconds each washing, the skin preparation maintains a protective barrier and effectively delivers said oil soluble and water soluble therapeutic agents to the skin"* (claim 2).

Neither Patent '208, nor Patent '382 shows or suggests non-phytotoxicity characteristics of the emulsion and its use in agricultural. Furthermore, it is not obvious to one of ordinary skill in the art that by modifying emulsions taught by Patent '208, and Patent '382, non-phytotoxicity may be obtained.

In other words, the compositions taught by Patent '208, and Patent '382 are not a non-toxic vehicle TTO.

Lawless states that antifungal, antibacterial and antiviral properties of tea tree oil are known in the art. However, as mentioned above, the strong phytotoxicity property of the TTO avoids its use in agriculture.

None of the possible combinations of two or more ingredients, each of which is taught by the prior art, would be useful as a non-phytotoxicity composition cited by '755.

Furthermore, none of the possible combinations of two or more ingredients, each of which is taught by the prior art, would be useful in treating agricultural crops as cited by '755.

Patent '208 teaches oil-in-water emulsion comprising an oily phase in an aqueous phase, as the oily phase is based upon triglyceride (claim 6) and other oils e.g., "vegetable fats and animal fats" (claim 16).

Thus, the use of free fatty acids ('755) in the present invention is not inherent either to the preparation taught by '208 or by the combination of both patents (i.e., '208, '382). The emulsion as defined in '208, "the oily phase constitutes not more than 50% w/w of the total emulsion in a range of 1-50% w/w, such as about 5-40%w/w and 10-30% w/w. The oily phase includes "a first lipid of vegetable or animal origin and a second lipid that is a vegetable fat" (claims 1, 16 & 17).

In contrast to '208, the emulsion of the present invention "contains about 0.01% up to about 10% (weight percent) tea tree oil, based on the total volume of said emulsion; about 0.1% to about 1.5% (weight percent) tea tree oil, based on the total volume of said emulsion; and about 0.1% to about 1.5% (weight percent) tea tree oil based, based on the total volume of said emulsion" ('755).

Furthermore, Patent '382 discloses "product concentration of 0.001% - 4.0% of tea tree oil, preferably 0.02%" (line 55-64), "wherein the tea tree oil concentration in the present invention ('755), as mentioned above focuses mainly on higher range 0.1-10% (claims 13-15).

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Therefore, for all of the above reasons, claims 14-19 are novel and do not lack an inventive step over Patent '382, in view of Patent '208 and Lawless.

Applicant therefore believes that the above remarks and the accompanying clarifications, completely overcome the Examiner's rejections. We would welcome your comments on the proposed response.

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

**Petition For One-Month Extension Of Time Under 37 CFR 1.136(a)**

The period for responding to the instant Office Action was set to expire on March 16, 2006. Applicant hereby requests that the period for responding to the instant Office Action be extended by one (1) month, so as to expire on April 16, 2006. Accordingly, this response is being timely filed.

**Payment Authorization**

The fee for a Petition for a One-Month Extension of Sixty Dollars (\$60.00) dollars for a small entity. No additional fees are believed due. The United States Patent and Trademark Office is hereby authorized to charge Deposit Account 501380 in the amount of Sixty Dollars (\$60.00) and any additional fee which is necessary in connection with this filing.

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Respectfully submitted,



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